



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.        | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------------|------------------|
| 10/812,683  | 03/30/2004  | Eric C. Stelter      | 10231                      | 4018             |
| 7590  | 01/27/2005  |                      |                            |                  |
| Mark G. Bocchetti<br>Eastman Kodak Company<br>343 State Street<br>Rochester, NY 14650 |             |                      | EXAMINER<br>CHEN, SOPHIA S |                  |
|   |             |                      | ART UNIT<br>2852           | PAPER NUMBER     |

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/812,683

Applicant(s)

STELTER ET AL.

Examiner

Sophia S. Chen

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-23 and 31-36 is/are allowed.
- 6) ☒ Claim(s) 1,4-7,24 and 27-29 is/are rejected.
- 7) ☒ Claim(s) 2,3,8,25,26 and 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because the reference numeral "16" in Figure 5 (filed 8/11/04) points to a wrong position. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Art Unit: 2852

3. The disclosure is objected to because of the following informalities:
- a. Page 9, line 26, "42" should be "40".
  - b. Page 10, line 10, needs to insert "now US Pat. No. 6,728,503," after "2001,".
  - c. Page 22, line 7, needs to insert "now US Pat. No. 6,692,880," after "2003/0073017,".
  - d. Page 22, line 7, needs to insert "now US Pat. No. 6,797,448," after "2003/0013032,".
  - e. Page 22, line 16, "SrFe<sub>12</sub>O<sub>19</sub>" should be "SrFe<sub>12</sub>O<sub>19</sub>".
  - f. Page 23, line 24, "g/cm2" should be "g/cm<sup>2</sup>".
  - g. Page 24, line 24, "g/m2" should be "g/m<sup>2</sup>".
  - h. Page 24, line 25, "g/m2" should be "g/m<sup>2</sup>".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 5, 7, 24, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Fritz et al. (US Pat. No. 4,602,863)

The patent discloses an electrographic printer, comprising: an imaging member 18; a toning shell 3 located adjacent the imaging member 8 and defining an image

Art Unit: 2852

development area Y therebetween, through which developer is passed (Figure 5a); a rotating magnetic core 2 comprising a plurality of magnetic poles arranged such that adjacent poles are of opposite polarity, the magnetic core 2 located adjacent the toning shell 3, subjecting the developer to magnetic pole transitions at a rate exceeding 257 pole transitions per second as measured from the frame of reference of a stationary observer (column 3, lines 17-27; column 14, lines 27-32; and Figure 5a); the developer comprising polyester toner (column 9, lines 58-60 and column 13, lines 27-40); and the developer comprising toners and carriers, the toner comprising a toner charge, the carrier comprising a carrier charge (column 12, lines 49-55), and triboelectric properties (electrostatic charge) existing between the toners and carriers (column 10, lines 32-36 and column 12, lines 56-60). Because the toners rub the carriers to produce the electrostatic charges between them (one charge on toners and opposite charge on carriers), it is inherently that the toner charge being proportional to the carrier charge.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

Art Unit: 2852

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 4, 6, 27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fritz et al. in view of Oyama et al. (US Pat. Pub. No. US 2003/0035663 A1)

Fritz et al., as discussed above, differs from the instant claimed invention in not disclosing the toner being surface treated.

Oyama et al. discloses an image forming apparatus comprising a developer including toner and carrier (paragraph [0043]); the toner comprising a resin such as polyester (paragraph [0044]); and the toner being surface treated (silica and titanium oxide added onto the outer surface of the resin; paragraph [0044]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the surface treatment as taught by Oyama et al. to the toner of Fritz et al. to improve the fluidity (Oyama et al.; paragraph [0044]).

***Allowable Subject Matter***

9. Claims 9-23 and 31-36 are allowed.

10. Claims 2, 3, 8, 25, 26, and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2852

11. The following is a statement of reasons for the indication of allowable subject matter: Claim 9 is allowable over the prior art of record because the prior art of record does not teach or suggest the toning shell voltage minus the imaging voltage being proportional to a toner charge to mass ratio of the developer cubed as set forth in the claimed combination.

Claim 16 is allowable over the prior art of record because the prior art of record does not teach or suggest the toning shell voltage minus the imaging voltage being proportional to average charge per toner particle of the developed image cubed as set forth in the claimed combination.

Claim 31 is allowable over the prior art of record because the prior art of record does not teach or suggest the developer comprising a measured dielectric length that is less than 3 times the average diameter of the carrier particles as set forth in the claimed combination.

***Other Prior Art***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fritz et al. (US Pat. No. 4,473,029) discloses an electrographic printer, comprising: an imaging member; a toning shell located adjacent the imaging member and defining an image development area therebetween, through which developer is passed; a rotating magnetic core comprising a plurality of magnetic poles arranged such that adjacent poles are of opposite polarity, the magnetic core located adjacent the toning shell, subjecting the developer to magnetic pole transitions at a rate exceeding

Art Unit: 2852

257 pole transitions per second as measured from the frame of reference of a stationary observer; the developer comprising polyester toner; and the toner charge being proportional to the carrier charge.

Stelter et al. (US Pat. No. 5,376,492) discloses an electrographic printer, comprising: an imaging member; a toning shell located adjacent the imaging member and defining an image development area therebetween, through which developer is passed; and a rotating magnetic core comprising a plurality of magnetic poles arranged such that adjacent poles are of opposite polarity, the magnetic core located adjacent the toning shell, subjecting the developer to magnetic pole transitions at a rate exceeding 257 pole transitions per second as measured from the frame of reference of a stationary observer.

Kaukeinen et al. (US Pat. No. 5,489,975) discloses an electrographic printer, comprising: an imaging member; a toning shell located adjacent the imaging member and defining an image development area therebetween, through which developer is passed; and a rotating magnetic core comprising a plurality of magnetic poles arranged such that adjacent poles are of opposite polarity, the magnetic core located adjacent the toning shell, subjecting the developer to magnetic pole transitions at a rate exceeding 257 pole transitions per second as measured from the frame of reference of a stationary observer.

Rushing et al. (US Pat. No. 5,839,020) discloses an electrographic printer, comprising: an imaging member; a toning shell located adjacent the imaging member and defining an image development area therebetween, through which developer is



Art Unit: 2852

passed; and a rotating magnetic core comprising a plurality of magnetic poles arranged such that adjacent poles are of opposite polarity, the magnetic core located adjacent the toning shell, subjecting the developer to magnetic pole transitions at a rate of 250 pole transitions per second as measured from the frame of reference of a stationary observer.

Stelter et al. (US Pat. Pub. No. US 2002/0168200 A1) discloses an electrographic printer, comprising: an imaging member; a toning shell located adjacent the imaging member and defining an image development area therebetween, through which developer is passed; a rotating magnetic core comprising a plurality of magnetic poles arranged such that adjacent poles are of opposite polarity; and the magnetic core located adjacent the toning shell.

Stelter et al. (EP 0 625 734 A1) discloses an electrographic printer, comprising: an imaging member; a toning shell located adjacent the imaging member and defining an image development area therebetween, through which developer is passed; a rotating magnetic core comprising a plurality of magnetic poles arranged such that adjacent poles are of opposite polarity; and the magnetic core located adjacent the toning shell.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

Art Unit: 2852

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen  
Primary Examiner  
Art Unit 2852

Ssc  
January 25, 2005